

WHAT IS CLAIMED IS:

1 1. A seat for use by an occupant in a vehicle, the seat comprising:
2 a seat base configured to be supported in the vehicle;
3 a back frame including a first transverse member, a first side member and a
4 second side member, wherein the first transverse member interconnects each of the side
5 members at a location toward an upper end of the back frame, the back frame further
6 including a second transverse member interconnecting the first and second side members a
7 spaced distance from the first transverse member;

8 a compliant back member having a first end operably connected to the first
9 transverse member and a second end operably connected to the second transverse member;
10 and

11 a biasing member having a first end operatively engaging the compliant back
12 member and a second end being anchored with respect to the back frame wherein when a
13 seat occupant's back applies a force to the compliant back member, the biasing member
14 applies a reaction force.

1 2. The seat of claim 1, wherein the compliant back is coupled to the second
2 transverse member by at least one pivot member such that the upper portion of the
3 compliant back extends in a cantilevered fashion over the upper end of the back frame and a
4 spaced distance from the back frame, wherein when the occupant in the seat leans into the
5 upper portion of the compliant back, the upper portion can flex about the pivot until
6 contacting the upper end of the back frame.

1 3. The seat of claim 2, including at least one additional pivot member located a
2 spaced distance from the other pivot member and coupled to the compliant back and the
3 second transverse member.

1 4. The seat of claim 1, including a side bolster, with one side bolster coupled to
2 each of the first and second side members of the back frame and extended from the side
3 members.

1 5. The seat of claim 4 wherein the side bolsters are aligned with the compliant
2 back such that the compliant back can be moved clear of the side bolsters.

1 6. The seat of claim 5, wherein the compliant back includes a slotted, flexible
2 portion and expanded side portions configured to extend above the side bolsters to support
3 the upper back and extremities of the occupant of the seat.

1 7. The seat of claim 1, wherein the biasing member is coupled to at least one of
2 the side members and the lower portion of the compliant back.

1 8. The seat of claim 1, wherein the biasing member includes an adjuster to vary
2 the tension in the biasing member to effect tension in the compliant back.

1 9. The seat of claim 1, wherein the biasing member includes at least one spring.

1 10. The seat of claim 1, wherein the seat is an automobile seat.

1 11. The seat of claim 1, including a change of position mechanism coupled to the
2 back frame and seat base, wherein the back frame is moved in proportional relation to the
3 seat base.

1 12. The seat of claim 11, wherein the change of position mechanism includes at
2 least one electric motor.

1 13. A seat for use by an occupant in a vehicle, the seat comprising:

2 a seat back frame;

3 a compliant back member having a first portion pivotally connected to the
4 seat back frame and a second portion laterally spaced from the first portion, the second
5 portion pivotally and slidably connected to the seat back frame; and

6 a biasing member having a first end operatively and slidably engaging the
7 compliant back member, the biasing member including a second end being anchored with
8 respect to the back frame wherein the biasing member applies a force against the compliant
9 back member.

1 14. The seat of claim 13 further comprising a motor connected to the biasing
2 member and wherein the biasing member is adjustable to selectively adjust the amount of
3 force applied by the biasing member against the compliant back member.

1 15. The seat of claim 14 wherein the biasing member comprises:

2 a first spring member aligned with the first side portion of the back frame,
3 the first spring member having a first end having a roller member connected thereto, the
4 roller member of the first end of the first spring member engaging the compliant back
5 member in a location aligned with a lumbar portion of the back of an occupant;

4 roller member of the first end of the first spring member engaging the compliant back
5 member in a location aligned with a lumbar portion of the back of an occupant;
6 a second spring member located between the second side portion of the back
7 frame and the first spring member, the second spring member having a first end having a
8 roller member connected thereto, the roller member of the first end of the second spring
9 member engaging the compliant back member in a location aligned with a lumbar portion of
10 the back of an occupant; and
11 a lateral support member interconnecting the first spring member and the
12 second spring member laterally transferring forces between the first spring member and the
13 second spring member.